

# Anthrax

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## **What is anthrax?**

Anthrax is a disease caused by bacteria that create spores. People can get sick when spores enter the body. Spores can enter the body in different ways and cause different types of illness. When the spores enter through a cut or sore, a skin infection can occur. When the spores are breathed in, they may cause serious breathing problems. When they are in meat that is not cooked enough before it is eaten, an illness of the intestine may result.

## **Who gets anthrax?**

Anthrax occurs naturally in certain wild and domestic animals (e.g., cattle, sheep, goats, camels, antelopes, and other herbivores), most commonly in South and Central America, Southern and Eastern Europe, Asia and Africa. Anthrax occurs occasionally in animal herds in the United States. It can also occur in humans who come into contact with infected animals or contaminated animal products (e.g., hides, hair, wool, bone, bone products, and wool).

## **How is anthrax spread?**

Spread of anthrax from one person to another is extremely rare. People get sick when they come in contact with spores that are in the soil and in animals or animal products in parts of the world where the disease occurs.

## **Could anthrax be used for bioterrorism?**

Yes. Anthrax is one of the agents that could be used for bioterrorism because it could cause increased illness and death in the population if used as a weapon. In September 2001 in the United States, anthrax spores were sent to several locations through the mail. Twenty-two people got sick, five of whom died. Information about ways to identify suspicious mail can be found on the U.S. Postal Service website at [www.usps.com](http://www.usps.com).

## **What are the symptoms of anthrax?**

The symptoms of anthrax are different, depending on the type of exposure. When the spores enter through a cut or sore, a painless lesion appears, which eventually forms a black center. Swelling of lymph glands close to the lesion may occur. When the spores are breathed in, symptoms may resemble influenza and without early treatment, may progress to severe breathing problems and even death. When infected meat is eaten, initial symptoms are nausea, loss of appetite, vomiting, followed by abdominal pain, vomiting of blood and severe diarrhea.

## **How soon after exposure do symptoms appear?**

Symptoms usually appear within 1 to 7 days after exposure, but the time period may vary depending on how the spores enter the body.

## **How is it diagnosed and treated?**

Anthrax is diagnosed through special laboratory tests. Samples may be taken from different parts of the body, depending on the type of anthrax (e.g., blood, skin lesions, or respiratory secretions). Specific antibiotics can be prescribed by a doctor to treat anthrax. To be effective, treatment should start immediately. If left untreated, the disease can be fatal. The most serious type of anthrax happens when the spores are breathed in.

## **What can be done to prevent the spread of anthrax?**

Vaccination of people in high-risk occupations can reduce the spread of anthrax (see below). Careful handling of dead animals suspected of having anthrax; providing good ventilation (air flow) when processing hides, fur, hair or wool; and vaccinating animals can help prevent anthrax. If a person has had a known exposure to anthrax, vaccination and/or antibiotics may prevent the disease.

## **Is there a vaccine for anthrax?**

There is a vaccine for anthrax, but it is recommended only for the following groups: 1. People who work with anthrax in a laboratory; 2. People who work with animal hides or furs imported from high-risk areas; 3. People who will have repeated exposures to anthrax spores (e.g., workers investigating areas contaminated from a bioterrorist attack); 4. People who handle animal products in high-risk areas (e.g., veterinarians who travel to work in countries where anthrax incidence is higher); and 5. Military personnel who work in areas where anthrax could be used as a bioterrorism weapon. The vaccine is not currently recommended for others.